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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,846	08/25/2003	Jeffrey M. Brown	87326.3920	1451

7590 12/19/2006  
BAKER & HOSTETLER LLP  
Washington Square, Suite 1100  
1050 Connecticut Avenue, N.W.  
Washington, DC 20036

EXAMINER
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YENKE, BRIAN P

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/646,846

Applicant(s)

BROWN ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 04 Oct 06 have been fully considered but they are not persuasive.

### ***Applicant's Arguments***

- a) Applicant states that Rittman test signal is not a signal embedded within a signal stream, but instead is applied as a substitute signal during a test procedure.
- b) Applicant traverses the "OFFICIAL NOTICE" of claims 11-12.

### ***Examiner's Response***

- a) It is noted that Rittman discloses that a test signal is transmitted from a transmitting end via some RF carrier wave onto a receiving end. Given the broadest interpretation of the claim, since Rittman disclose a transmitting an RF signal that includes an test signal which is embedded via some RF carrier wave and transmitted, the claim (in this instance, claim 19) is met. The applicant is correct that Rittman discloses that prior art systems are known to have of injecting a known signal into cable system wherein this method has disadvantages via interference or some unused frequency spectrum. However, Rittman discloses generating a random generated sequence which is transmitted/modulated with an RF carrier signal. Although, it is known as stated by Rittman to inject a test signal or not, the process/application of doing either scheme provides no unexpected results, since less information will occupy less bandwidth,

and including two signal streams together increases the possibility for interference. It is also known that depending upon the application, it would be desirable to include such test signal with a normal broadcast signal which would provide an uninterrupted display/channel for the viewer.

b) The examiner took OFFICIAL NOTICE regarding the first/second measurement/characterization of the transmission system wherein warning signals are generated if the results of such exceed a threshold. Previously cited, Lee, US 6,917,389 discloses a system which generates warning messages based upon a computed SNR. Also, newly cited references, US 6,496,221, Wolf discloses and in-service quality measurement system which determines, the quality of a received video signal, based upon the original transmitted version and computes/annotates the results/measurements accordingly.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

A person shall be entitled to a patent unless –

Claims 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Rittman, US 6,687,632.

In considering claims 19-22

Rittman discloses a system which tests the CATV systems transmission by generating/transmitting quasi-random data along transmission path (22) which is recovered and

analyzed for ghosts/reflections using oscilloscope 24 and PC using MATLAB 40 (Fig 5). As shown in the figure the system passes RF signals with the generated random data where the signals are analyzed at a location near the transmitted end in order to eliminate any undesirable equalization by the receiver/set-top box. Regarding the time intervals, Rittman discloses the autocorrelation of the transmitted signal with the reflected signal (col 5. line 5-15). Rittman discloses that the data corresponding to the reflections/ghosts of the transmitted data is recovered on digital oscilloscope 24 and then transferred to a MatLab program running on a PC 40 for analysis.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3a, Claims 1-9 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rittman, US 6,687,632 in view of AAPA (Applicant's Admitted Prior Art).

In considering claims 1-9 and 13-16

Rittman does not explicitly recite the conventional standard of transmitting a test signal (GCR)/telemetry pattern on a specific horizontal line in the NTSC stream.

However, AAPA discloses that this is a conventional feature in the art (See page 3, para 0007)

Thus since Rittman discloses the concept/feature of analyzing a transmission side for reflection it would have been clearly obvious to one of ordinary skill in the art to implement the conventional testing sequence as done via AAPA which would allow the system of Rittman to test conventional transmitted NTSC signals with GCR/telemetry signals for degradation/reflection which can be analyzed by the broadcaster/transmitter in order to provide a quality signal to the viewer.

Regarding the newly amended limitations pertaining to forward/backward couplers, although Rittman does not explicitly disclose such, their use is conventional in the art in order to provide a device for separately (ideally) sampling (through a known coupling loss for measuring purposes) either the forward (incident) or backward (reflected) wave in transmission line (as defined by IEEE STD 100-1996, 6<sup>th</sup> edition). Thus the use of such is considered an obvious modification to one of ordinary skill in the art, which would provide the advantages as stated above.

3b. Claims 10-12 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rittman, US 6,687,632.

In considering claims 10-12 and 17-18

However, Rittman does not explicitly recite a system that analyzes the physical condition of the transmission system nor generating warning signal if the system exceeds and established threshold.

Ritman does disclose the monitoring/analyzing of the transmission system by correlating the reflections and determining a time delay in ascertaining the round trip distance to the impedance mismatch of the system. Ritman also discloses the monitoring is performed on the transmission end in determining the performance of the transmitter/system.

The analysis of the physical condition as well as the identifying causes, prediction changes (i.e. trends) and the generation of an alarm in a transmission system is conventional in the art, since the degradation/reduction of quality of a signal (i.e. TV signal) to viewers is immediately noticed on the display and hence broadcasters/transmitters employ a variety of systems/equipment to alert the possibility/reality of such degradation, thus the examiner takes "OFFICIAL NOTICE" regarding as such, since it would have been clearly obvious for a transmission system which analyzes the quality of such signals to utilize such features for the advantages as noted above.

### *Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure—see newly cited references on attached form PTO-892. The examiner would like the applicant to clarify the differences between the International Written Opinion filed 08 Mar 2005, in lieu of such written opinion. The examiner has also attach newly cited references, namely, US 6,437,832 which discloses the mitigation of multipath which is performed via the combination of a signal along with a wideband overlay signal.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (571)272-7359. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, David L. Ometz, can be reached at (571)272-7593.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(571)-273-8300**



Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is  
(703)305-HELP.

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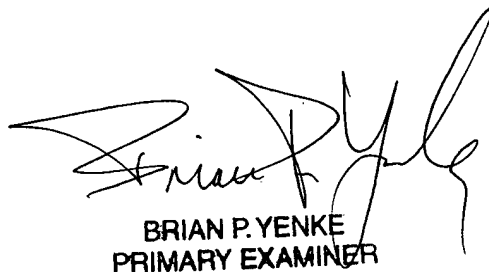
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B.P.Y  
13 December 2006



BRIAN P. YENKE  
PRIMARY EXAMINER